

**ABSTRACT**

Optical components are flip chip mounted onto a substrate for improved alignment.

5 Each device is fabricated using "build-up" layers above a substrate. Each has an optical confinement region in which optical radiation travels in use, and a bonding surface. The overall depth of the layers above the optical confinement region is closely controlled during fabrication, for instance by the use a "spacer" layer, so that when the devices are subsequently flip chip mounted adjacent one another on a shared substrate

10 by means of their bonding surfaces, they can be passively positioned so that their optical confinement regions abut and optical radiation can be coupled from one to the next in use.

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(Figure 6.)